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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,838	05/16/2001	Hyung-Gon Noh	1568.1015	9186

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EXAMINER

CHANEY, CAROL DIANE

ART UNIT PAPER NUMBER

1745

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/855,838

Applicant(s)

NOH, HYUNG-GON

Examiner

Carol Chaney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-32 is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

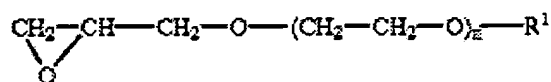
A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Miura et al., US Patent 6,163,563.

Miura et al. disclose lithium batteries with polymer solid electrolytes. The polymer may be terpolymer, and exemplary terpolymers are given as copolymers of ethylene oxide, allyl glycidyl ether and monomers of the general form:



(Note column 19, Table 1, example 3.)

The polyether copolymer is mixed with an organic solution of a lithium salt, such as a gamma-butyrolactone solution of lithium perchlorate. The solution is cast onto a PTFE plate, and solvent evaporated to form a gel. (See column 16, lines 29-40.) Thus,

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the final products disclosed by Miura et al. should be identical to the products claimed by the applicants, since the record does not show distinctions between polymer electrolytes made using a first solvent for the polymer and a second solvent for the electrolyte lithium salt and electrolytes made using one solvent. The patentability of a product is independent of how it was made and the burden is on applicants to show product differences in product by process claims. See, for example, *Ex parte Jungfer* 18 USPQ 1796, 1800 (BPAI 1991); *Bristol-Myers Co. v. U.S. International Trade Commission* 15 USPQ 2d 1258 (Fed. Cir. 1989); *In re Thorpe* 227 USPQ 964 (Fed. Cir. 1985); *In re Best* 195 USPQ 430 (CCPA 1977).

### ***Allowable Subject Matter***

Claims 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 20-32 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to suggest a method for forming a lithium battery by mixing a first solution of a terpolymer as claimed with a second solution of a lithium salt, and forming a sandwich structure for the battery where the sandwich structure includes a separator and the mixed solution. The prior art suggests similar final polymer electrolytes, and suggests polymer electrolytes which include a porous polymer matrix impregnated with a gel polymer electrolyte. However, it is not considered obvious to

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one of ordinary skill in the art to form a similar gel electrolyte with two solvents, and use the mixed solution to form a sandwich structure as claimed.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Oliver, US Patent 5,639,573 A discloses a lithium battery which includes a positive electrode, a negative electrode and an electrolyte system. The electrolyte system includes a polymer gel electrolyte with a first phase containing polymer and electrolyte salt disposed on and through the pores of a second phase which is substantially inert and does not absorb the electrolyte active species.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (703) 305-3777. The examiner can normally be reached on Mon - Fri 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 703-308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Carol Chaney  
Primary Examiner  
Art Unit 1745

cc  
May 5, 2003